

OPERATOR MANUAL



DIGILOAD™



WITTKE

PENCAG



DIGILOAD™
OPERATOR MANUAL



Liability

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To Contact Labrie Plus

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Parts and warranty: During business hours, 8:00 AM to 5:00 PM Eastern Standard Time

Technical Support Service: Available 24 hours

Website: www.labriegroup.com

E-mail: sales@labriegroup.com

IMPORTANT: For technical support and parts ordering, the serial number of your vehicle is required. Therefore, Labrie Enviroquip Group recommends to keep record of the information found on the VIN plate, which is located in the cab.



Safety

Safety is always of prime importance when operating any type of equipment. All operators working with this unit must be aware of the safety practices and features detailed in this section.

Safety Is Everyone's Business

Personnel are not to use the equipment if they are not well acquainted with the operations as well as all the safety precautions of such operations.

DANGER

INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN SERIOUS INJURY OR DEATH.

WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN SERIOUS INJURY OR DEATH.

CAUTION

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY.

CAUTION

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN PROPERTY DAMAGE.

Employer Responsibility

- ♦ Regularly inspect unit, including all safety equipment.

- ♦ Repair any present or potential mechanical malfunction.
- ♦ Keep records of unit inspections, maintenance, repairs and malfunctions.
- ♦ Provide adequate training to all operators.
- ♦ Monitor the employees operation of equipment and take appropriate action to ensure proper and safe use of the equipment.

Employee Responsibility

- ♦ Learn the safe operating procedures for the unit, and consult your supervisor if any procedure is unclear.
- ♦ Use the unit as per Labrie Enviroquip Group's guidelines only.
- ♦ Perform routine daily unit inspections.
- ♦ Report any malfunctions or concerns immediately to your supervisor.



General Safety Precautions

Do

- ♦ Inspect the DIGILOAD™ system components at the beginning of each day.
- ♦ Check the area to make sure it is clear of any personnel or possible obstructions.

NOTE: Small children are especially difficult to see. Be extremely cautious in areas with small children.

- ♦ Obey all warning and operation decals.

Don't

- ♦ Do not operate any unit while under the influence of alcohol, narcotics or other intoxicants.
- ♦ Do not talk on a cell phone or listen to loud music while driving. Cell phones and/or loud radio can be a distraction that can have fatal consequences.
- ♦ Do not wear jewelry or loose clothing.
- ♦ Do not leave the unit before it is brought to a complete stop and work brake or parking brake is applied.



Introducing the Digiload™

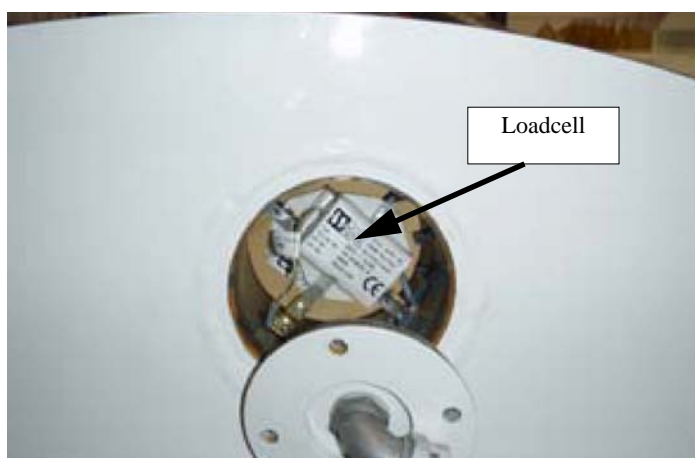
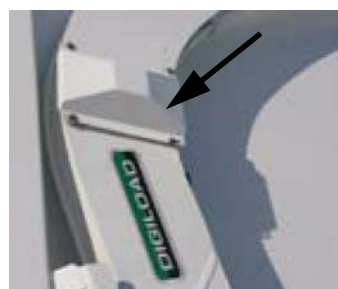
The Digiload™ helps fleet managers and truck operators in planning their route efficiently by weighing each container's content. To achieve this, the Digiload™ uses a series of technical components, such as transducers and computers, which will be described in details below.

Digiload™ Components

The Digiload™ includes the following:

Loadcells

Two loadcells are installed on each front loader arm in order to measure their deformation. These loadcells allow a precise and reproducible measurement of the stress change in the structure.



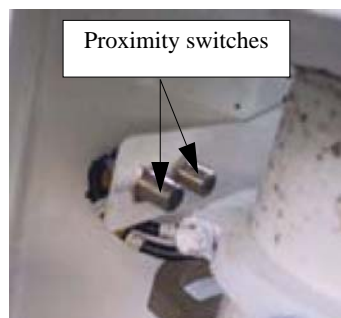
Accelerometer

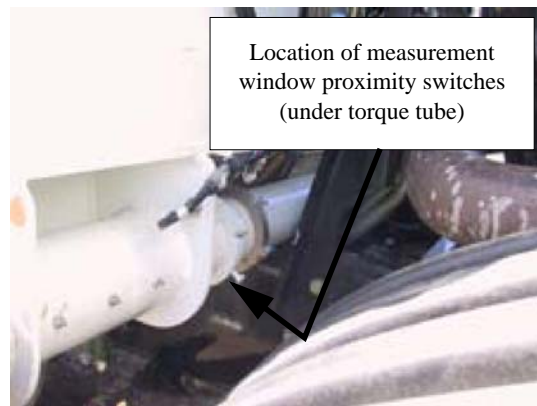
The accelerometer allows the system to weigh the container while it is moving, and to compensate for the angle when the unit is not on a flat and level surface.



Measurement Window Proximity Switches

Two proximity switches are used to define the measurement window. These proximity switches are located under the arm torque tube (on the curbside). When the arms are detected by the first proximity switch, the DIGILOAD™ starts weighing the container. The measurement process ends as soon as the arms are detected by the second proximity switch. While the arms are in the measurement window, the DIGILOAD™ takes numerous measurement points in order to be as precise as possible. The system weighs the container when it raises (container full) and when it lowers (container empty). The difference is equal to the container's content weight.





NOTE: In order to get a better precision, the arms should be raised and lowered smoothly while they cover the measurement window.

Weighing Processor

The weighing processor collects data sent by the loadcells, the measurement window proximity switches and the accelerometer. The collected data is used to calculate the container's content weight. The information is then sent to the display.



Digital Display

This device is used to display the weight of the containers (installed on units that are not equipped with an onboard computer).



Transponder (optional)

The transponder is a device that should be installed on containers collected by a RFID-reader-equipped unit (optional). Each transponder corresponds to a specific identification number. Then, the system binds the container weight with the transponder identification number, which allows the fleet manager to know how much a specific container weighs and when it has been collected.

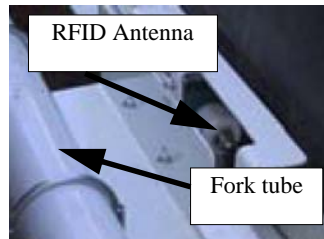
As the transponder is a passive device, no maintenance is necessary. It is energized by the RFID antenna.



NOTE: Transponder model may vary.

RFID Antenna (optional)

The RFID antenna converts electrical signals coming from the RFID reader into radio waves and radio waves coming from the transponder into electrical signals. It is located in front of the fork tube.



RFID Reader (optional)

The RFID reader receives the transponder signal via the RFID antenna and sends the information to the onboard computer. This device also energizes the transponder through the antenna, which is located behind the cab, on the front hopper wall (curb side).



Memory Stick

A memory stick is required to download lift data. Digiload digital display is equipped with a USB port. To know how to download lift data, refer to “Memory Port” on page 17.

3

Operating the DIGILOAD™

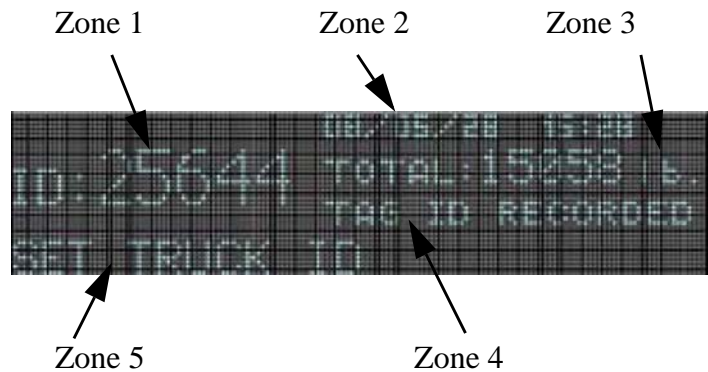
Digital Display

Introduction

The digital display shows each container weight and the total weight of material picked up during the day. It also allows the operator to download lift data in order to produce reports.

Display Zones

The digital display is composed of 5 zones.



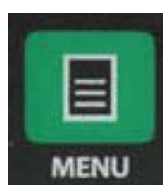
- ♦ Zone 1 = Container's weight and lift information
- ♦ Zone 2 = Date and time
- ♦ Zone 3 = Total weight (payload)
- ♦ Zone 4 = Tag information (optional)
- ♦ Zone 5 = Messages, menus and RFID number (optional)

Display Control Buttons

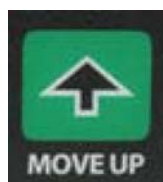
The digital display includes four control buttons:



- ◆ Use the Menu button to browse through the menus;



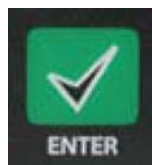
- ◆ Use the Move Up button to scroll up;



- ◆ Use the Move Down button to scroll down;



- ◆ Use the Enter button as a return key.



System Configuration

Date Setting

To set the date:

1. Press on MENU button.
2. Press on MOVE UP or MOVE DOWN button until “System Configuration” appears.
3. Press on ENTER.
4. Press on MOVE UP or MOVE DOWN until “Set Date” appears.
5. Press on ENTER.

NOTE: If the “Dump Data to USB First” message appears, insert a memory stick in the USB port. The “Dumping to USB” message will then appear. The memory stick can be removed once this message turns off.

6. Scroll up or down to choose the date format (YY/MM/DD, DD/MM/YY or MM/DD/YY).
7. Press on ENTER to save the chosen format. The “Change Year” message will appear.
8. Scroll up or down to select the year and press on ENTER. The “Change Month” message will appear.
9. Scroll up or down to select the month and press on ENTER. The “Change Day” message will appear.
10. Scroll up or down to select the day and press on ENTER to save the settings. You then go back to the Set Date Menu.
11. Press on MENU to go back to the system configuration mode.
12. Press on MENU to exit the menu mode.

Time Setting

To set the time:

1. Press on MENU button.
2. Press on MOVE UP or MOVE DOWN button until “System Configuration” appears.
3. Press on ENTER.
4. Press on MOVE UP or MOVE DOWN button until “Set Time” appears.
5. Press on ENTER. The “Form: 12-Hour Clock” message will appear.
6. To select the 24-hour clock, scroll up or down.
7. Press on ENTER. The “Change: Hours” message will appear.
8. Set the hour using the MOVE UP or MOVE DOWN button.

NOTE: In the 12-hour format, the values goes from 12:00 AM to 11:59 AM, then from 12:00 PM to 11:59 PM.

9. Press on ENTER to set the hour. The “Change Minutes” message will appear.
10. Using the MOVE UP or MOVE DOWN button, set the minutes.

11. Press on ENTER to save the settings. You then go back to the Set Time Menu.
12. Press on MENU to go back to the system configuration mode.
13. Press on MENU to exit the menu mode.

Unit of Measurement Setting

To set unit of measurement:

1. Press on MENU button.
2. Press on MOVE UP or MOVE DOWN button until “System Configuration” appears.
3. Press on ENTER.
4. Press on MOVE UP or MOVE DOWN button until “Set Units” appears.
5. Press on ENTER.
6. Scroll up or down to choose between the pounds (LB) or kilograms (KG).
7. Press on ENTER. You then go back to the Set Units Menu.
8. Press on MENU to go back to the system configuration mode.
9. Press on MENU to exit the menu mode.

Truck ID Setting (*MANDATORY***)**

To set truck ID:

1. Press on MENU.
2. Press on MOVE UP or MOVE DOWN button until “System Configuration” appears.
3. Press on ENTER.
4. Press on MOVE UP or MOVE DOWN button until “Set Truck ID” appears.
5. Press on ENTER.
6. The “Use Up/Down Arrows” message will appear. The first digit of the truck identification number is highlighted.
7. Scroll up or down to select the first truck identification digit.
8. Press on ENTER to skip to the next digit. Repeat step 6 to step 8 until the fifth digit is set.
9. Once the fifth digit is set, press on ENTER to save the truck identification number. You then go back to the Set Truck ID Menu.
10. Press on MENU twice to exit the menu mode.

Language Setting

To set the desired language:

1. Press on MENU.
2. Press on MOVE UP or MOVE DOWN button until “System Configuration” appears.
3. Press on ENTER.
4. Press on MOVE UP or MOVE DOWN button until “Set Language” appears.
5. Scroll up or down to select the desired language (English, Spanish or French).
6. Once the language is selected, press on ENTER to save the selection. You then go back to the Set Language Menu.

7. Press on MENU twice to exit the menu mode.

RFID Port Setting

The RFID port must be configured in RS-232.

To set the RFID Port:

1. Press on MENU.
2. Press on MOVE UP or MOVE DOWN button until “System Configuration” appears.
3. Press on ENTER.
4. Press on MOVE UP or MOVE DOWN button until “RFID Port Setting” appears.
5. Using MOVE UP or MOVE DOWN button, select RS-232.
6. Press on ENTER to save the setting. You then go back to the RFID Port Setting Menu.
7. Press twice on MENU to exit the menu mode.

Scale Port Setting

To establish the communication between the digital display and the Digiload system, the scale port must be configured properly. To do so:

1. Press on MENU.
2. Press on MOVE UP or MOVE DOWN button until “System Configuration” appears.
3. Press on ENTER.
4. Press on MOVE UP or MOVE DOWN button until “Balance Port Setting” appears.
5. Using MOVE UP or MOVE DOWN button, select RS-232.
6. Press on ENTER to save the setting. You then go back to the Balance Port Setting Menu.
7. Press twice on MENU to exit the menu mode.

Using the Digital Display

Weight and Identification Data

When a container is picked up, its weight is automatically displayed in zone 1 of the display (see *Display Zones* on page 11). As the onboard computer calculates the total weight of all containers picked up on a route, the total weight is always displayed in zone 3.

To **reset the total weight**, perform the following procedure:

1. Press on MENU.
2. Press on MOVE UP or MOVE DOWN button until “Reset Net Payload” appears.
3. Press on ENTER. The “Press Enter to Reset” message will appear.
4. Press on ENTER to reset the total weight.

RFID (optional)

When the unit is equipped with a RFID reader, the container identification data is also transmitted to the display. As soon as a RFID transponder is detected, the RFID number (or tag ID) appears in zone 5 (see *Display Zones* on page 11) and the “Tag ID Detected” message appears in zone 4.

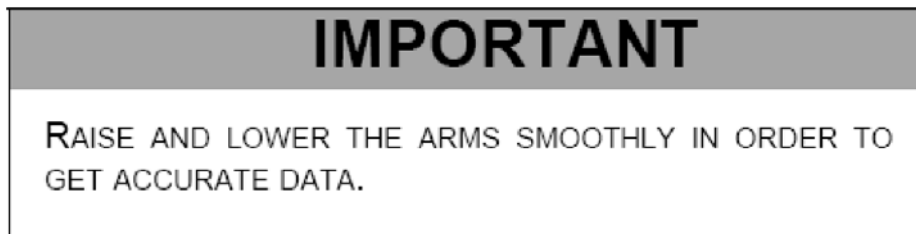
During a complete cycle, if no RFID signal is detected, the message “Tag ID Missing” appears in zone 4. Finally, when the tag ID is recorded during the lift, the “Tag ID Recorded” message appears.

RFID System Activation

To activate the RFID system:

1. Press on MENU.
2. Press on MOVE UP or MOVE DOWN button until “System Configuration” appears.
3. Press on ENTER.
4. Press on MOVE UP or MOVE DOWN until “RFID” appears.
5. Press on ENTER.
6. Use the MOVE UP or MOVE DOWN button to select the required option. The “RFID Available” and “RFID Not Available” messages will appear alternately.
7. Press on ENTER to save the selected option and to go back to the RFID Menu.
8. Press on MENU to go back to the system configuration mode.
9. Press on MENU to exit the menu mode.

Weighing Sequence and Displayed Messages



Here are the weighing sequence and all the messages that can be displayed during the process:

1- Container is lifted up.

- ♦ If the lift is performed correctly, the “Lift OK” message appears in zone 1.
- 2- If the lift is not performed correctly, the “Bad Lift” message appears in zone 1. As soon as the “Bad Lift” error message appears, the operator must lower the arms completely (without dumping the container) and then, raise the container again. If the weighing process is performed correctly, the error message should disappear and the “Lift OK” message should appear. Container content is dumped in the hopper.

3- Container is lowered.

- ♦ If the complete cycle was performed correctly, weight appears in zone 1 of the display.
- ♦ If the complete cycle was not performed correctly, the weight will not appear in zone 1. **The total weight will be incremented**, but the “Weight not recorded” message will appear. **The total weight may then be inaccurate.**

Exception Messages

When, for any reason, a cart cannot be picked up, or in case of a problem, the system allows the operator to link an exception message to this particular cart/location.

To associate an exception message to a particular cart/location:

1. Press on MENU.
2. Press on MOVE UP or MOVE DOWN button until “Exceptions” appears.

3. Press on ENTER.
4. Press on MOVE UP or MOVE DOWN button to select one of the exception messages.
 - DAMAGED CONTAINER
 - LOCKED CONTAINER
 - BLOCKED ACCESS
 - EMPTY CONTAINER
 - OVERFILLED CONTAINER
 - EXTRA CHARGE
 - DAMAGED RFID TAG
 - EXCEPTION #8
 - EXCEPTION #9
 - EXCEPTION #10
 - EXCEPTION #11
 - EXCEPTION #12

NOTE: Exceptions # 8 to #12 are used to associate any other situation to the cart/location. It is at customer's discretion to chose which problem or situation they represent.

5. Press on ENTER to set the exception message. You then exit the menu mode.

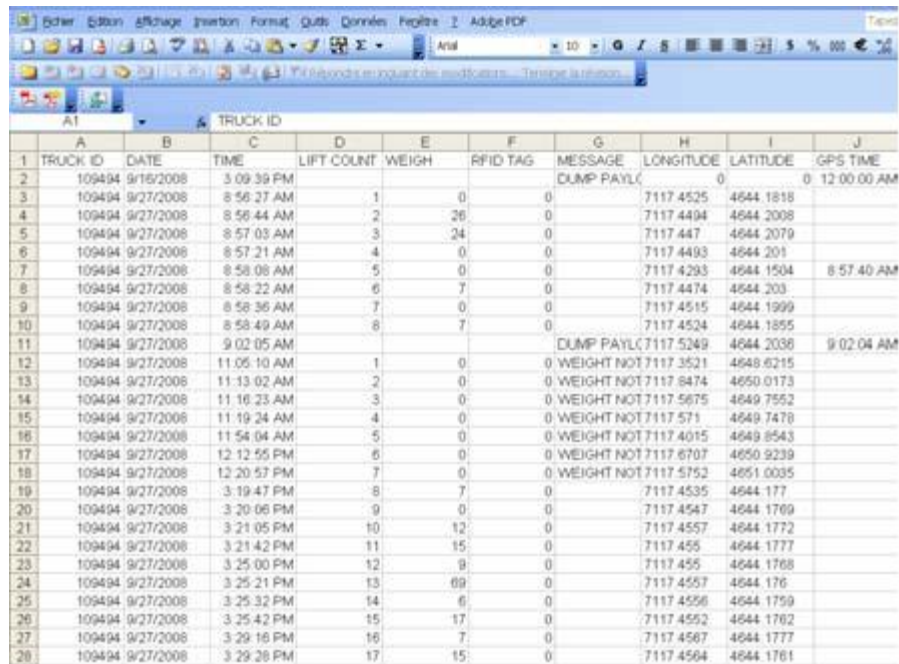
Memory Port

The digital display is also equipped with a memory port, in which you can plug in a memory stick. All the data is automatically saved on that device. The display contains enough memory to save about 2,000 data lines. When the system memory has reached its full capacity, the "Dump Data to USB First" message appears. **If no memory stick is plugged in the display, the oldest data will be overwritten by the new ones. We strongly recommend to regularly save lift data on a memory stick.**

At the end of the day, the operator must download the lift data file (LiftData.csv) on a computer and then delete the LiftData.csv file saved on the memory stick. This file contains the truck ID, date, time, weight, number of lifts performed, RFID (for RFIDreader equipped units) and the exception message related to each container picked up (see *Exception Messages* on page 16). The lift data file can be opened with Excel.

NOTE: The onboard computer saves the data even if no memory stick is plugged in the port. It can save the data collected during an entire working day. The data will be transfered as soon as a memory stick is plugged in.

The lift data file can be opened using Excel. Here is an example of a LiftData.csv file.



	A	B	C	D	E	F	G	H	I	J
	TRUCK ID	DATE	TIME	LIFT COUNT	WEIGH	RFID TAG	MESSAGE	LONGITUDE	LATITUDE	GPS TIME
1	109494	9/16/2008	3:09:39 PM				DUMP PAYL	0		0 12:00:00 AM
2	109494	9/27/2008	8:56:27 AM	1	0	0		7117 4525	4644 1818	
3	109494	9/27/2008	8:56:44 AM	2	26	0		7117 4404	4644 2008	
4	109494	9/27/2008	8:57:03 AM	3	24	0		7117 4447	4644 2079	
5	109494	9/27/2008	8:57:21 AM	4	0	0		7117 4493	4644 2051	
6	109494	9/27/2008	8:58:08 AM	5	0	0		7117 4293	4644 1504	8:57:40 AM
7	109494	9/27/2008	8:58:22 AM	6	7	0		7117 4474	4644 203	
8	109494	9/27/2008	8:58:36 AM	7	0	0		7117 4515	4644 1999	
9	109494	9/27/2008	8:58:49 AM	8	7	0		7117 4524	4644 1855	
10	109494	9/27/2008	9:02:05 AM				DUMP PAYL	7117 5249	4644 2038	9:02:04 AM
11	109494	9/27/2008	11:05:10 AM	1	0	0	WEIGHT NOT	7117 3521	4648 6215	
12	109494	9/27/2008	11:13:02 AM	2	0	0	WEIGHT NOT	7117 8474	4650 0173	
13	109494	9/27/2008	11:16:23 AM	3	0	0	WEIGHT NOT	7117 5675	4649 7552	
14	109494	9/27/2008	11:19:24 AM	4	0	0	WEIGHT NOT	7117 571	4649 7478	
15	109494	9/27/2008	11:54:04 AM	5	0	0	WEIGHT NOT	7117 4015	4649 8543	
16	109494	9/27/2008	12:12:55 PM	6	0	0	WEIGHT NOT	7117 6707	4650 9239	
17	109494	9/27/2008	12:20:57 PM	7	0	0	WEIGHT NOT	7117 5752	4651 0035	
18	109494	9/27/2008	3:19:47 PM	8	7	0		7117 4535	4644 177	
19	109494	9/27/2008	3:20:06 PM	9	0	0		7117 4547	4644 1769	
20	109494	9/27/2008	3:21:05 PM	10	12	0		7117 4557	4644 1772	
21	109494	9/27/2008	3:21:42 PM	11	15	0		7117 455	4644 1777	
22	109494	9/27/2008	3:25:00 PM	12	9	0		7117 455	4644 1768	
23	109494	9/27/2008	3:25:21 PM	13	69	0		7117 4557	4644 176	
24	109494	9/27/2008	3:25:32 PM	14	6	0		7117 4556	4644 1759	
25	109494	9/27/2008	3:25:42 PM	15	17	0		7117 4552	4644 1762	
26	109494	9/27/2008	3:29:16 PM	16	7	0		7117 4567	4644 1777	
27	109494	9/27/2008	3:29:26 PM	17	15	0		7117 4564	4644 1761	

RS-232 Port Configuration

The digital display can be linked to an external data transmission system. To ensure communication between the system and its peripheral, the RS-232 port must be configured.

To configure the RS-232 port:

1. Press on MENU.
2. Press on MOVE UP or MOVE DOWN button until "System Configuration" appears.
3. Press on ENTER.
4. Press on MOVE UP or MOVE DOWN until "Configure RS-232 Port" appears.
5. Press on ENTER.
6. Use the MOVE UP or MOVE DOWN button to select the peripheral you want to connect.
 - On-Board Computer
 - Printer (not available at this time)
7. Press on ENTER to save the selection and go back to the Configure RS_232 Port Menu.
8. Press on MENU to go back to the system configuration mode.
9. Press on MENU to exit the menu mode.



Our office in the U.S.

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General Fax: 1-920-232-2496
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P.O. Box 2785
Oshkosh, WI 54903-2785

Parts and Warranty

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(24 hours)

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